REMARKS

Claims 1-9 and 11-19 remain pending.

With respect to claim 2, applicant notes for the record that the word "inserting" was changed to –encapsulating– in the last office action.

Claims 1-9 and 11-19 were rejected under 35 USC 112, first paragraph (written description and enablement) and the specification was objected to under 35 USC 132 for new matter. Respectfully, applicant disagrees. Applicant teaches encapsulation as being both intercellular and through a coating. Although, one of ordinary skill in the art would recognize the true scope of encapsulation, both techniques are clearly taught and applicant should not be limited by Examiner's remarks as to the true scope of encapsulation. Encapsulation is taught, for example at page 10, line 14 through page 12, line 13 for encapsulation within cells using reverse osmotic lysis, particle injection, etc. and page 14, last 5 lines through page 15, line 10 using coating such as a phospholipid anchor, etc. The specification also clearly states that the one of the purposes of this invention is to "prevent immunological detection (phagocytosis)" (ingestion by white blood cells). See, e.g., page 10, line 5-7, and page 15, lines 3 and 4. Thus, the phrase "not within a white blood cell" does have support in the specification as originally presented.

Claims 1-9 and 11-19 were provisionally rejected under the judicially created doctrine of obvious-type double patenting. Applicants respectfully traverse the Office's provisional rejection of Claims 1-9 and 11-19 as being allegedly unpatentable over claims 1-6, 8-10, 12-17 of the inventive entity's co-pending Application No. 09/727,749. The Office [Page 4 ¶ 7] alleges that "Although not all of the conflicting claims are identical, there is duplication and the remaining claims are not patentably distinct from each other." Applicants respectfully submit the claims of

this application do not duplicate the invention disclosed in co-pending Application No. 09/727,749. Specifically, the claims of this application claim a method for "inserting a microdevice or nanodevice into a body fluid stream" Unlike the claims of co-pending Application No. 09/727,718, Claims 1-9 and 11-19 of the present invention do not teach or suggest "detecting a body condition." Applicants respectfully request that the provisional double patenting rejection of Claims 1-9 and 11-19 be withdrawn.

Claims 1-3, 5, 6-9, 11, 14 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Benjamin et al. US4,793,825. Applicants respectfully traverse the Office Action's rejection of Claims 1-3, 5, 6-9, 11 14 and 15 under 35 U.S.C. 103(a) as being allegedly unpatentable over Benjamin et al. The Office [Page 5 ¶ 10] alleges that Benjamin et al. discloses (abstract) a method and system for injecting a microdevice into the vascular system or inserting into a white blood cell (column 15, lines 33-38) using a microdevice carrying circuits for signal processing, the circuits containing silicon (abstract), phosphorous (column 11, lines 47-50), providing output (abstract), transmitting information (column 16, lines 30-33). The Office [Page 5 ¶ 10] also alleges that Benjamin et al. discloses (column 15, lines 33-37) encapsulating a microdevice in a cell. The Office [Page 5 ¶ 10] alleges that Benjamin et al. also teach a white blood cell as an example of a cell for encapsulating. The Office [Page 5 ¶ 10] alleges that in the absence of any demonstration of criticality in the disclosure of the invention for not encapsulating within a white blood cell, it would have been obvious to someone of ordinary skill in the art at the time of the invention that Benjamin et al. is not teaching encapsulating only into a white blood cell and that the teaching of Benjamin et al. can be used with cells that are not a

white blood cell. Respectfully, applicant disagrees. Applicants invention teaches away from ingestion by white blood cells due to destruction of the nanodevices due to phagocytosis, page 10, line 5-7, and page 15, lines 3 and 4. This is why applicant teaches encapsulation. In contrast, Benjamin et al. teach that "the device may be encapsulated in a cell, e.g. white cell" and "encapsulation may be achieved by allowing white cells to engulf the device in-vitro and to inject the resultant white cells and device." (Column 15, lines 33-36) With respect to Claim 11, Benjamin et. al. do not teach or suggest a microdevice of a resonance type nanodevice. Thus, Claims 1-3, 5, 6-9, 11,14 and 15 are not rendered obvious over Benjamin et al.

With respect to Claims 3 and 8, the Examiner acknowledges that Benjamin et al. does not expressly disclose encapsulation of a red blood cell. Nevertheless, the Office Action [Page 6 ¶ 10] alleges that one of ordinary skill in the art would have found it obvious to substitute one cell type for another for the purpose of inserting a nanoprobe into a cell to monitor intracellular environments because different cell types were art-recognized equivalents at the time of the invention in regard to methods of inserting into a cell. Applicants contend that Benjamin et al. teach that "the device may be encapsulated in a cell, e.g. white cell" and "encapsulation may be achieved by allowing white cells to engulf the device in-vitro and to inject the resultant white cells and device." (Column 15, lines 33-36) Applicants argue that white cells are not equivalent to other cell types and Benjamin et al. expressly teach that "the body sees the white cells as friendly" and that "the devices are not trapped" in the white cells. (Column 15, lines 36-37) Applicants maintain that Benjamin et al. merely disclose an encapsulation method for white cells. Applicant also argues that Benjamin et. al. do not disclose encapsulation of lipid molecules. Therefore, Claims 3 and 8 are not obvious over Benjamin et al.

With respect to Claims 9 and 11, the Office [Page 6 ¶ 10] alleges that Benjamin teaches implants comprising silicon and phosphorus. (Abstract, column 11) Applicants maintain that Benjamin et al. merely disclose encapsulation method for white cells. Specifically, Applicants argue that Benjamin et al. teach that "the device may be encapsulated in a cell, e.g. white cell" and "encapsulation may be achieved by allowing white cells to engulf the device in-vitro and to inject the resultant white cells and device." (Column 15, lines 36-37) Applicants argue that Benjamin et al. do not disclose a method for encapsulation of a microdevice and nanodevice in a red blood cell. Thus, Claims 3 and 8 are not obvious over Benjamin et al.

Claims 1-8 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh. Applicants respectfully traverse the Office Action's rejection of Claims 1-8 and 15 under 35 U.S.C. 103(a) as being allegedly unpatentable over Vo-Dinh. With respect to Claims 1 and 15, the Office [Page 6 ¶ 11] alleges that Vo-Dinh discloses in column 2, lines 18-41, delivering nanoprobes inside organisms and injecting into cells, detecting bodily indicators, and intracellular and extracellular diagnosis by the nanoprobes. The Office [Page 6 ¶ 11] also alleges Vo-Dinh discloses a nanoprobe having a circuit element. (Column 2, lines 42-48 and column 3, lines 23-55) The Examiner acknowledges that Vo-Dinh does not teach delivering the nanoprobe into a fluid stream within a body; however, the Office [Page 6 ¶ 11] alleges that it would have been obvious that the methods disclosed by Vo-Dinh for delivering nanoprobes into an organism for medical diagnosis would include the capability of inserting the nanoprobes into a fluid stream of a body if that stream is in a blood vessel. Furthermore, the Office [Page 6 ¶ 11] alleges that it

is well known in the art that the extracellular environment recited by Vo-Dinh contains streams of fluids. Applicants respectfully argue that Vo-Dinh does not teach or suggest a method of providing at least one of a microdevice and nanodevice into a fluid stream within a body. Further, Applicants respectfully argue that Vo-Dinh only teaches intracellular insertion of a probe. Vo-Dinh teaches "the nanoprobe of the present invention comprises a metallic system, which the SERS effect and a chemical/biological system which provides selective binding within the cell." (Column 2, lines 42-45) Applicants respectfully argue that the probe of Vo-Dinh must be inserted in the cell if the probe of Vo-Dinh must have a selective binding within the cell. Vo-Dinh states that a "general object of the present invention is to provide a surface-enhanced Raman spectroscopic technique that increases Raman emission due to the surface-enhanced Raman scattering effect and can be used inside microsize structures, such as cell." (Column 2, lines 17-22) Vo-Dinh states that an "object is to provide methods for injecting the probe into such microscopic structures. (Column 2, lines 32-33) Applicants argue that Vo-Dinh does not teach or suggest the feature of encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not within a white blood cell. Applicants argue that Vo-Dinh does not teach or suggest at least one microdevice or nanodevice, having at least one circuit feature thereon. Applicants argue that Vo-Dinh merely teaches that "the nanoprobe can have one of several embodiments . . ." (Column 3, lines 23-67 and column 4, lines 1-49 Therefore, Applicants maintain that independent Claims 1 and 15 are not obvious over Vo-Dinh.

With respect to Claim 15, the Office [Page 7 ¶ 11] alleges that Vo-Dinh discloses in column 2, lines 35-41, delivering a nanoprobe into an organism for extracellular diagnosis. The Examiner acknowledges that Vo-Dinh fails to expressly teach not inserting into, and hence

encapsulation not within a white blood cell. The Office Action [Page 7 ¶ 11] alleges that in the absence of any teaching of criticality, it would have been obvious to choose a cell type other than a white blood cell. Applicants respectfully argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Additionally, Applicants argue that Vo-Dinh does not teach or suggest encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not within a white blood cell. Thus, Applicants maintain that Claim 15 is not obvious over Vo-Dinh.

With respect to Claim 2, the Office [Page 7 ¶ 11] alleges that Vo-Dinh discloses a method of insertion, and hence encapsulation as recited in claim 1. The Office [Page 7 ¶ 11] also alleges that Vo-Dinh teaches injecting nanoprobes into cells. (Abstract) In addition, the Office [Page 7 ¶ 11] alleges that Vo-Dinh teaches methods for delivering nanoprobes inside a cell. (Column 2, lines 37-39 and column 5, lines 65-68 and column 6, lines 1-22) Applicants respectfully argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants also argue that Vo-Dinh does not teach or suggest encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not within a white blood cell. Thus, Applicants maintain that Claim 2 is not obvious over Vo-Dinh.

With respect to Claim 4, the Office [Page 7 ¶ 11] alleges that Vo-Dinh discloses a method of insertion into, and hence encapsulation by a cell as recited in claims 1 and 2. The Office [Page 7 ¶ 11] also alleges that Vo-Dinh teaches inserting nanoprobe materials into a cell by micro injector. (Column 5, lines 65-68 and column 6, line 1) Applicants respectfully argue that Vo-Dinh does not teach or suggest each feature of Claim 4. Applicants contend that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants argue that Vo-Dinh does not teach or suggest encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not

within a white blood cell. Therefore, Applicants maintain that Claim 4 is not obvious over Vo-Dinh.

With respect to Claim 6, the Office [Page 7 ¶ 11] alleges that Vo-Dinh discloses a method of insertion, and hence encapsulation as recited in claim 1. The Office [Page 7 ¶ 11] also alleges that Vo-Dinh teaches a nanoprobe as a detector for toxic chemicals and biological indicators. (Column 2, lines 33-37) Applicants argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants argue that Vo-Dinh does not teach or suggest encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not within a white blood cell. Thus, Applicants maintain that Vo-Dinh does not render Claim 6 obvious.

With respect Claim 7, the Office [Page 7 ¶ 11] alleges that Vo-Dinh discloses a method of insertion, and hence encapsulation as recited in claim 1. The Office [Page 7 ¶ 11] also alleges that it would have been obvious that insertion into an organism as described by Vo-Dinh is equivalent to insertion into a biological member as described in the invention. Applicants respectfully argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants maintain that Vo-Dinh fails to teach or suggest encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not within a white blood cell. Therefore, Applicants maintain that Vo-Dinh does not render Claim 7 obvious.

With respect to Claims 3, 5 and 8, the Office [Page 8 ¶ 11] alleges that Vo-Dinh teaches methods methods for delivering nanoprobes inside a cell. (Column 6, lines 1-22) The Office [Page 8 ¶ 11] alleges that Vo-Dinh meets the limitations of claim 5 except that it does not specify a cell type. The Office [Page 8 ¶ 11] alleges that different cell types were art-recognized

equivalents at the time of the invention in regard to methods of inserting into a cell. Furthermore, the Office [Page 8 ¶ 11] alleges that it would have been obvious to substitute cell types for the purpose of inserting a nanoprobe into a cell to monitor intracellular environments. Applicants respectfully argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants argue that Vo-Dinh does not teach or suggest encapsulating at least one of microdevice and nanodevice, wherein said encapsulating is not within a white blood cell. Hence, Applicants contend that Claim 2 is not obvious over Vo-Dinh.

Claims 3, 5 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh in view of Hadlaczky et. al. US 6,077,697. Applicants respectfully traverse the Office Action's rejection of Claims 3, 5 and 8 under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh in view of Hadlaczky. The Office [Page 8 ¶ 12] alleges that Vo-Dinh discloses a method of insertion into an organism or biological member as recited in claim 1. The Office [Page 8 ¶ 12] also alleges that Vo-Dinh teaches methods for delivering nanoprobes inside a cell as recited in claim 2. (Column 6, lines 1-22) The Examiner acknowledges that Vo-Dinh does not teach cell types. The Office [Page 8 ¶ 12] alleges that Hadlaczky et al. teach methods of inserting into cells, including microinjection and electroporation. (Column 5, lines 28-41) The Office alleges that Hadlaczky et al. also teach cell types including cells from plants, insects, reptiles, amphibians, and mammals, stem cells, lymphocytes and neural cells. The Office [Page 8 ¶ 12] alleges that it would have been obvious that microinjection and other insertion techniques as taught by Vo-Dinh can be used on the cell types recited in the claims of the invention. Applicants argue respectfully that Vo-Dinh and Hadlaczky et al. do not teach or suggest a method of providing at

least one of a microdevice and nanodevice, having at least one circuit feature thereon as in independent Claim 1. Therefore, dependant Claims 3, 5 and 8 are not obvious over Vo-Dinh in view of Hadlaczky.

Claims 9, 11 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh in view of Peeters. Alternatively, Claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Benjamin in view of Peeters. Applicants respectfully traverse the Office's rejection of Claims 9, 11 and 14 under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh in view of Peeters and the rejection of Claim 11 under 35 U.S.C. 103(a) as being unpatentable over Benjamin in view of Peeters.

With respect to Claims 9 and 14, the Office [Page 9 ¶ 13] alleges that Vo-Dinh teaches a nanodevice circulating or stationed in the body as recited in claim 1. The Examiner acknowledges that Vo-Dinh does not teach a substrate made of well-known semiconductor materials gallium arsenide, silicon, silicon oxides or germanium. The Office [Page 9 ¶ 13] alleges that Peeters teaches nanoelectrode arrays built with substrates comprised of silicon, germanium, gallium arsenide, or other semiconductors to detect, characterize and quantify single molecules in a solution such as individual proteins, complex protein mixtures, DNA and other molecules for disease or for predisease diagnosis. (Abstract, column 1, lines 14-1, and column 4, lines 14-18 and 41-45) The Office [Page 9 ¶ 13] alleges that it would have been obvious that a nanodevice or microdevice in a fluid stream in the body having a circuit element to facilitate the detection and diagnosis of bodily conditions as taught by Vo-Dinh could incorporate a nanoelectrode array as taught by Peeters that is capable of quantifying biologically significant

molecules in a fluid medium, such as individual proteins, complex protein mixtures, DNA and other molecules, for disease or for predisease diagnosis. Applicants argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Vo-Dinh and Peeters are improperly combined since one of ordinary skill in the art would not be motivated to look to Peeters for modification of Vo-Dinh. Peeters does not teach or suggest an in-vivo device. Rather, Applicants contend that Peeters teaches in-vitro measurement of biological molecules in solution. Applicant argues that Vo-Dinh and Peeters do not teach encapsulating at least one of a microdevice and nanodevice, wherein said encapsulating is not a white blood cell. Applicants argue that Benjamin et al. teach that "the device may be encapsulated in a cell, e.g. white cell" and "encapsulation may be achieved by allowing white cells to engulf the device in-vitro and to inject the resultant white cells and device." (Column 15, lines 33-36) Applicant further argues that Benjamin et al. teach that "since the body sees the white cells as friendly, the device are not trapped." (Column 15, lines 36-37) Applicant argues that Benjamin et al. merely disclose an encapsulation method for white cells. Thus, Claims 9 and 14 are not obvious over Vo-Dinh in view of Peeters.

With respect to Claim 11, the Office [Page 9 ¶ 13] alleges that Vo-Dinh or alternatively, Benjamin et al. teach a nanodevice circulating or stationed in the body as recited in claim 1. The Examiner acknowledges that neither Vo-Dinh nor Benjamin et al. teach a (oscillating) resonance type device. The Office [Page 9 ¶ 13] alleges that Peeters teaches detection of resonance type nanoelectrode arrays. (Column 9, lines 45-46, and column 10, lines 1-19) The Office [Page 9 ¶ 13] alleges that it would have been obvious that a nanodevice or microdevice in the body to detect and diagnose as taught by Vo-Dinh or, alternatively, Benjamin et al. can be provided with

any passive or active function within the capabilities of nanoelectrodes and, in particular, can have that array constructed as a resonance device to enable detection. Applicants argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants contend that Vo-Dinh and Peeters are improperly combined because one of ordinary skill in the art would not be motivated to look to Peeters for modification of Vo-Dinh. Peeters does not teach or suggest an in-vivo device. Applicants argue that Peeters teaches in-vitro measurement of biological molecules in solution. Benjamin et al. and Peeters do not teach or suggest a nanodevice and microdevice of a resonance type nanodevice. Applicant argues that Vo-Dinh and Peeters do not teach encapsulating at least one of a microdevice and nanodevice, wherein said encapsulating is not a white blood cell. Therefore, Claims 11 is not obvious over Vo-Dinh in view of Peeters.

Claims 12-14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh in view of Østensen at el. U.S. Patent No. 6,375,931 or, alternatively, Benjamin et al. in view of Østensen at el. Applicants respectfully traverse the Office Action's rejection of Claims 12-14 under 35 U.S.C. 103(a) in view of Østensen at el. U.S. Patent No. 6,375,931 or, alternatively, Benjamin et al. in view of Østensen at el.

With respect to Claim 12, the Office action [Page 10 ¶ 14] alleges that Vo-Dinh or, alternatively, Benjamin et. al teach a nanodevice inserted and within a body as recited in Claim 1. The Examiner acknowledges Vo-Dinh or, alternatively, Benjamin et al. do not teach detecting the device by magnetic resonance. The Office [Page 10 ¶ 14] alleges that Østensen at el. teach microparticles and nanoparticles circulating in a body and detectable by magnetic resonance for medical diagnosis. (Column 5, lines 53-67, and column 18, lines 41-45) The Office [Page 10 ¶

14] alleges that it would have been obvious that a nanodevice or microdevice inserted and within in a body as disclosed by Vo-Dinh or, alternatively, Benjamin et al. can be a device detectable by the magnetic resonance techniques well known in the art of nuclear magnetic resonance, electron spin resonance, and electron paramagnetic resonance (EPR). Applicants respectfully argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicants maintain that Østensen at el. merely disclose "gas containing agents,"which enhance imaging performance for X-rays, light imaging, and magnetic resonance. According to the teachings of Østensen at el., the "gas containing agents" are positioned in areas of interest within the body and are targeted for certain types of medical conditions. The Examiner acknowledges that Østensen at el. teach detection by magnetic resonance of microparticles or nanoparticles of gas containing agents circulating in a body. Applicants argue that Østensen at el. do not teach or suggest detection techniques for microdevices or nanodevices. Therefore, Applicants maintain that the combination of Vo-Dinh and Østensen at el. do not render Claim 12 obvious over Vo-Dinh in view of Benjamin or alternatively over Benjamin in view of Østensen at el.

With respect to Claims 13-14, the Office [Page 10 ¶ 14] alleges that Vo-Dinh, or alternatively, Benjamin et al. and Østensen at el. teach a nanoprobe detectable by magnetic resonance as recited in claims 1 and 12. The Examiner acknowledges that Vo-Dinh, or, alternatively, Benjamin et al. and Østensen at el. do not teach molecules or compounds detected by EPR. The Office [Page 10 ¶ 14] alleges that it would have been obvious that a nanodevice or microdevice inserted and within a body as disclosed by Vo-Dinh or, alternatively, Benjamin et al., and able to respond to EPR detection would incorporate substances well known in the art to

respond to EPR detection such as odd electron molecules or any of the well-known paramagnetic substances recited in claim 13, or an organic free radical as recited in claim 14. Applicants argue that Vo-Dinh does not teach or suggest at least one of a microdevice and a nanodevice, having at least one circuit feature. Applicant argues that Østensen at el. merely disclose "gas containing agents," which enhance imaging performance for X-rays, light imaging, and magnetic resonance. As taught by Østensen at el., the "gas containing agents" are positioned in areas of interest within the body and are targeted for certain types of medical conditions. Furthermore, the Examiner acknowledges that Østensen at el. teach detection by magnetic resonance of microparticles or nanoparticles of gas containing agents circulating in a body. Applicant argues that Østensen at el. do not teach at least one of a nanodevice and microdevice of a resonance type nanodevice as in Claim 13 because Østensen at el. do not teach or suggest detection techniques for microdevices or nanodevices. In addition, Applicants argue that Østensen at el. do not teach or suggest a nanodevice and microdevice from the group of consisting of phosphorus, arsenic, germanium, or organic free radicals as in Claim 14 since detection techniques for nanodevices and microdevices are neither taught nor suggested by Østensen at el. Therefore, Applicants maintain that the combination of Vo-Dinh and Østensen at el. do not render Claims 13-14 obvious over Vo-Dinh in view of Benjamin or alternatively over Benjamin in view of Østensen at el.

1. Claims 16-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh or alternatively, Benjamin et al. as applied to claim 15 above further in view of Schechter et al. US Patent No. 4,120,649. Applicants respectfully traverse the Office's rejection of Claims 16-18 under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh or alternatively, Benjamin et al. as

applied to claim 15 above further in view of Schechter et al. US Patent No. 4,120,649.

With respect to Claim 16, the Office [Page 11 ¶ 15] alleges that Vo-Dinh or, alternatively, Benjamin et al. teach treatment of circulating or stationary device to prevent immunologic response and prolong tissue retention. The Office [Page 11 ¶ 15] alleges that Schechter et al. teach in the abstract the treatment of transplants with a compound to improve biological function by reducing antigenicity and prolonging retention by the host. The Office [Page 11 ¶ 15] alleges that it would have been obvious to treat a nanodevice or microdevice inserted and within in a body as disclosed by Vo-Dinh. Alternatively, the Office [Page 11 ¶ 15] alleges that it would have been obvious to treat a nanodevice or microdevice with a compound to improve biological function by reducing antigenicity and prolonging retention by a body as disclosed by Benjamin et al. Further, in regard to Claims 17 and 18, the Office Action alleges that it is well known in the art that organ hydroxyls, including ethylene glycol, reduce immune system response and increase retention by tissues. Applicants argue that Vo-Dinh does not teach or suggest a method comprising providing at least one of a microdevice and nanodevice into a blood stream within a body. Applicants maintain that Vo-Dinh only teaches intracellular insertion of a probe. As taught by Vo-Dinh, "the nanoprobe of the present invention comprise a metallic system, which the SERS effect and a chemical/biological system which provides selective binding within the cell." (Column 2, lines 42-45) Applicant argues that in order for Vo-Dinh's probe to have selective binding within the cell, Vo-Dinh's probe must be inserted within the cell. Furthermore, Vo-Dinh states that a " general object of the present invention is to provide a surface-enhanced Raman spectroscopic technique, that increases Raman emission due to the surface-enhanced Raman scattering effect and can be used inside microsize structures, such as cell." (Column 2, lines 17-

22) Vo-Dinh states that an "object is to provide methods for injecting the probe into such microscopic structures. (Column 2, lines 32-33) Applicant also argues that Vo-Dinh does not teach or suggest at least one microdevice or nanodevice, having at least one circuit feature thereon. Applicant argues that Vo-Dinh only teaches that "the nanoprobe can have one of several embodiments . . ." (Column 3, lines 23-67 and column 4, lines 1-49) Thus, Applicants insist that independent Claims 16-18 are not obvious over Vo-Dinh.

2. Claims 17-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh or, alternatively, Benjamin et al. as applied to claim 15 above further in view of Dustin et al. Patent No. 5,071,964. Applicants respectfully traverse the Office's rejection of Claims 17-19 under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh or, alternatively, Benjamin et al. as applied to claim 15 above further in view of Dustin et al. Patent No. 5,071,964. The Office [Page 11 ¶ 16] alleges that Vo-Dinh or, alternatively, Benjamin et al. teach a nanodevice circulating in the body. The Examiner acknowledges Vo-Dinh and Benjamin et al. do not teach addition of a lipid anchor, using an organ hydroxyl, to the circulating device to facilitate its attachment to cell membranes. The Office Action [Page 11-12 ¶ 16] alleges that Dustin et al. teach in the abstract the use of lipid anchors to enable the attachment of circulating micelles to a variety of target molecules on a cell. The Office Action [Page 12 ¶ 16] alleges that it is well known in the art that organ hydroxyls (e.g. ethylene glycol) are used as cross-linking molecules that can be modified to have little effect on the chemistry of the molecules being linked. The Office [Page 12 ¶ 16] alleges that it would have been obvious to provide a nanodevice or microdevice in the body with a lipid anchor to promote attachment of the device to a cell and thereby prolong its presence in a

body and enhance its diagnostic or therapeutic function. Applicants respectfully argue that Dustin et al. teach a micelle of an adhesion protein, which naturally includes a phosphatidylinositol lipid anchor. Since the focus of Dustin is limited, it would not be obvious to provide lipid anchors with respect to microdevices or nanodevices. Applicants argue that Vo-Dinh does not teach or suggest a method comprising providing at least one of a microdevice and nanodevice into a blood stream within a body. Further, Applicants respectfully argue that Vo-Dinh only teaches intracellular insertion of a probe. Vo-Dinh teaches "the nanoprobe of the present invention comprise a metallic system, which the SERS effect and a chemical/biological system which provides selective binding within the cell." (Column 2, lines 42-45) Applicant respectfully insist selective binding of Vo-Dinh's probe within the cell requires the insertion of Vo-Dinh's probe within the cell. According to the teachings of Vo-Dinh, Vo-Dinh, a " general object of the present invention is to provide a surface-enhanced Raman spectroscopic technique, that increases Raman emission due to the surface-enhanced Raman scattering effect and can be used inside microsize structures, such as cell." (Column 2, lines 17-22) Additionally, Vo-Dinh states that an "object is to provide methods for injecting the probe into such microscopic structures. (Column 2, lines 32-33) Applicant argues that Vo-Dinh does not teach or suggest at least one microdevice or nanodevice, having at least one circuit feature thereon. Vo-Dinh merely teaches that "the nanoprobe can have one of several embodiments . . ." (Column 3, lines 23-67 and column 4, lines 1-49) Therefore, Applicants maintain that independent Claims 17-19 are not obvious over Vo-Dinh.

Claims 17-19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh,

or alternatively, Benjamin et al. as applied to claim 15 above further in view of Li et al. Patent No. 6,090,408. Applicants respectfully traverse the Office's rejection of Claims 17-19 under 35 U.S.C. 103(a) as being unpatentable over Vo-Dinh, or alternatively, Benjamin et al. as applied to claim 15 above further in view of Li et al. Patent No. 6,090,408. The Office [Page 12 ¶ 17] alleges that Vo-Dinh or, alternatively, Benjamin et al. teach a nanodevice circulating in the body. The Examiner acknowledges that neither Vo-Dinh nor Benjamin et al. teach addition of a lipid anchor, using an organ hydroxyl, to the circulating device to facilitate its attachment to cell membranes. The Office [Page 12 ¶ 17] alleges that Li et al. teach the use of ethylene glycol as a lipid anchor to enhance the attachment of circulating microparticles (liposomes) to reduce clearance by the reticuloendothelial system and thereby increase the medical effectiveness of the microparticles. (Abstract, column 14, lines 59-67, and column 15, lines 1-5) The Office [Page 12 ¶ 17] alleges that it would have been obvious to provide a nanodevice or microdevice in the body with a lipid anchor to promote attachment of the device to a cell and thereby prolong its presence in a body and enhance its diagnostic or therapeutic function. Applicants contend that Li et al. teach the linking of polymerized liposome particles to targeting agents or contrast enhanced agents for the purpose of improving bodily retention of targeting agents or contrast enhanced agents. Applicants maintain that the application of liposome particles as taught by Li et al. do not teach or suggest the application of either general use of lipid anchors using organo hydroxyl or the application of specific agents to microdevices or nanodevices. Moreover, Applicant maintains that Li's teachings do not prove the feasibility of the application of either general use of lipid anchors using organo hydroxyl or the application of specific agents to microdevices or nanodevices. Therefore, the combined teachings of Vo-Dinh and Li do not render Claims 17-19

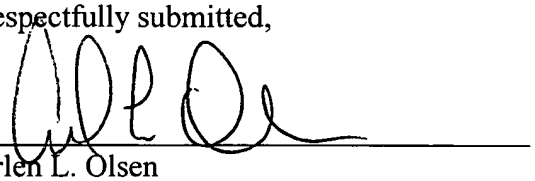
obvious.

The Office [Page 13 ¶ 18] alleges that Kopelman et al. US 6,143,558, teaches encapsulation of a nanodevice or microdevice. Applicants argues that Kopelman et al. merely disclose encapsulation of sensor particles into the cell for detecting response to analyte. (Column 3, lines 31-34 and column 6, lines 22-29) Specifically, Kopelman et al. teach insertion of either solid or semisolid particles" "attained by fine grinding and filtering or by micro-emulsion techniques used to form mono-disperse colloidal particles. (Column 3, lines 31-34 and column 4, lines 5-22)

Applicant respectfully submits the entire application is now in condition for allowance. Should the Examiner believe that anything further is necessary in order to place the application in condition for allowance, or if the Examiner believes that a personal or telephone interview would be advantageous to resolve the issues presented, he is invited to contact the Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,

Date: 12-11-2003



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